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# PATENT SPECIFICATION

1,035,004

DRAWINGS ATTACHED.

Inventors:—

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Date of filing Complete Specification: Feb. 14, 1963.

Application Date: Nov. 15, 1961. No. 36645/64.  
(Divided out of No. 1,035,001).

Complete Specification Published: July 6, 1966.

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Index at Acceptance:—A1 M2B.

Int. Cl.:—A 01 j 7/00.

## COMPLETE SPECIFICATION.

### Improvements relating to Components, Primarily for Use in Milking Installations.

We, GASCOIGNES (READING) LIMITED, a British Company, of Gascoigne House, Berkeley Avenue, Reading, Berkshire, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to the teat cups used for milking and has for its object to provide improved means for washing the liners thereof *in situ*, all four liners of a conventional teat cup cluster being washed together at the same time by a sprayed cleaning solution. The invention is particularly suited for application to in-place cleaning systems for vacuum milking installations and, by way of example, the invention will be described as applied to such a system as disclosed in our copending Patent Application No. 40791 of 1961 (Serial No. 1,035,001) in which use is made of a wash line which is independent of the vacuum and milk lines essential to a vacuum milking installation.

In accordance with the present invention there is provided a rack for use when washing milking machine teat cups which comprises a plurality of perforated spray nozzles projecting from a pipeline adapted to deliver a cleaning solution through the perforations of the nozzles to the interiors of the liners of teat cups fitted over the nozzles, with which nozzles are associated, one for each nozzle, elastic cups adapted to grip resiliently around the mouths of the rigid shells of said teat cups. The perforated nozzles allow of the projection of high

velocity jets of a cleaning solution onto the interior surfaces to be cleaned.

If desired each nozzle may comprise a substantially straight perforated standpipe adapted to be gripped near its root, where it adjoins the cleaning solution pipeline, by the hollow boss of said associated elastic cup, the mouth of the teat cup liner being adapted to grip said standpipe adjacent the floor of the interior of said elastic cup, and the resilient rim or wall of said elastic cup being adapted to grip the mouth of the teat cup shell to ensure a fluidtight connection between the nozzle and a teat cup fitted thereto.

One form of teat cup wash rack according to the invention is illustrated, by way of example, in the accompanying drawing.

In the teat cup cluster wash rack illustrated, each rack comprises four units, one for each of the four teat cups customarily used in a cluster, and each unit consists of a standpipe 50 which extends up from a wash line F through the inherently gripping boss 51 of a rubber cup 52 having a restricted lip 53. This lipped cup 52 is adapted to receive and yieldably hold inverted a conventional teat cup assembly 54 comprising an outer rigid shell 55 and an inner rubber liner 56, the intumed mouth flange 57 of which grips the standpipe 50 in fluidtight manner.

The standpipe 50 is provided with perforations 58 through which high velocity jets of cleaning solution are caused to issue under pressure so as to thoroughly cleanse the interior of the liner 56. It will be under-

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stood that when thus set-up for washing the teat cup assembly 54 is in the same condition as when milking, in that the interior of shell 55 is still connected to the pneumatic pulsator system and hence the liner flexes as during milking, which ensures entry of the cleaning solution into all the minute crevices in the rubber, thus effecting efficient cleaning.

It is not essential to provide a lengthy standpipe 50. It may be sufficient for it to just enter the opening of the liner flange and not project beyond the lip of cup 52, and moreover the cup 52 instead of upstanding from wash line F may depend therefrom as in the racks H illustrated in our co-pending Patent Application No. 40791 of 1961 (Serial No. 1,035,001).

#### WHAT WE CLAIM IS:—

1. A rack for use when washing milking machine teat cups, which comprises a plurality of perforated spray nozzles projecting from a pipeline adapted to deliver a cleaning solution through the perforations of the nozzles to the interiors of the liners of teat cups fitted over the nozzles, with which

nozzles are associated, one for each nozzle, elastic cups adapted to grip resiliently around the mouths of the rigid shells of said teat cups.

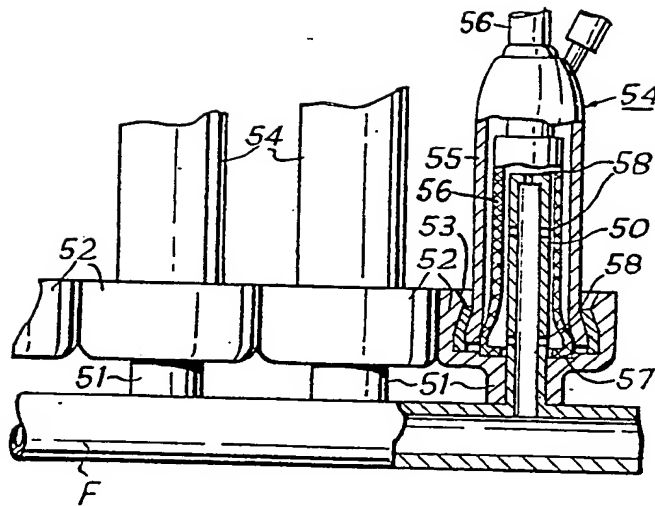
2. A teat cup wash rack as claimed in Claim 1, wherein each nozzle comprises a substantially straight perforated standpipe adapted to be gripped near its root, where it adjoins the cleaning solution pipeline, by the hollow boss of said associated elastic cup, the mouth of the teat cup liner being adapted to grip said standpipe adjacent the floor of the interior of said elastic cup, and the resilient rim or wall of said elastic cup being adapted to grip the mouth of the teat cup shell to ensure a fluidtight connection between the nozzle and a teat cup fitted thereto.

3. A teat cup wash rack for a milking machine as claimed in claim 1, constructed substantially as hereinbefore described with reference to the accompanying drawing.

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1035004 COMPLETE SPECIFICATION  
1 SHEET

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